

REMARKS/ARGUMENTS

The Examiner did not indicate in the Office Action that he reviewed the references listed in the Form 1449 submitted with the Information Disclosure Statement mailed on July 25, 2005, which PAIR shows as entered on July 28, 2005. Applicants request that the Examiner review the cited references in the previously submitted Form 1449 and initial each reference to indicate such review. Further, on September 1, 2005, Applicants submitted an additional IDS with further references. Applicants also request review and consideration of this recent IDS.

The Examiner rejected claims 1-36 as anticipated (35 U.S.C. §102(b)) by Kukura (U.S. Patent No. 6,453,320). Applicants traverse.

Claims 1, 13, and 27 concern implementing a workflow comprised of nodes, and require: generating a workflow packet accessed by users at the nodes in the workflow; receiving a request to add one target object in one of a plurality of data stores to the workflow packet, wherein each data store includes multiple objects; determining a first object identifier of the target object that is used to identify the target object in one data store; generating a second object identifier indicating the data store including the target object and the first object identifier; and inserting the generated second object identifier into the workflow packet, where nodes accessing objects in the workflow packet use the second object identifier to access the target object for use at the node.

The Examiner cited the title of Kukura as disclosing the preamble of implementing a workflow comprised of nodes. (Second Office Action, pg. 2). The title of Kukura recites "Method and System for Providing Object References in a Distributed Object Environment Supporting Object Migration". Nowhere does the cited title disclose or mention a workflow comprised of nodes. The title mentions a distributed object environment, but a distributed object environment is not the same as a "workflow". The Specification defines a "workflow" as a series of processes to be performed by users at a client computer. After one user in the workflow performs a specified action, the work item or other information is then routed to one or more further nodes where further action may be taken. (Specification, pg. 1, lines 20-25). Nowhere does the cited title mention a workflow or a series of processes to be performed by users at a client computer, and routing work items to nodes for further actions.

The Examiner cited col. 2, lines 20-30 and FIG. 5 of Kukura as disclosing the claim requirement of receiving a request to add one target object in one of a plurality of data stores to

the workflow packet, wherein each data store includes multiple objects. (Second Office Action, pg. 2) Applicants traverse.

The cited col. 2 discusses use of a location service for object migration. References to objects are exported that contain information needed to communicate with the locator rather than the server in which the objects are implemented. The location service listens for requests to the same set of addresses and servers listen for requests at addresses dynamically assigned each time a server program is executed.

Although the cited col. 2 discusses the use of references to objects to communicate with a locator, nowhere does the cited col. 2 anywhere disclose or mention receiving a request to add one target object in one of a plurality of data stores to a workflow packet, wherein each data store includes multiple objects. There is no mention in the cited col. 2 of the claim requirement of adding a target object in one of a plurality of data stores to a workflow packet that is accessed by users at nodes in the workflow. There also is no mention of workflows.

The Examiner cited col. 2, lines 38-46 of Kukura as disclosing the claim requirement of generating a second object identifier indicating the data store including the target object and the first object identifier, which identifies the target object in one data store. (Second Office Action, pg. 3) Applicants traverse.

The cited col. 2 mentions that a location service exchanges object references between the server and locator. The server constructs a prototype object reference referred to as a prototype direct IOR that includes information needed by a client to communicate with the server and the locator constructs a prototype indirect IOR with information needed to communicate with a location agent.

Nowhere does the cited col. 2 disclose the claim requirement of generating a second object identifier indicating the data store including the target object and the first object identifier, which identifies the target object in one data store. Instead, the cited Kukura generates IOR objects having information needed by a client to communicate with a server and locator. Applicants submit that generating objects having information to communicate with a client and server is different from and does not disclose the claim requirement of generating a second object identifier indicating the data store including the target object and the first object identifier, which identifies the target object in the data store. There is no disclosure in the cited col. 2 of

generating an object identifier having different types of identifier information for an object that is subject to a request to add to a workflow.

The Examiner cited col. 4, lines 1-3 of Kukura as disclosing the claim requirement of inserting the generated second object identifier into the workflow packet, where nodes accessing objects in the workflow packet use the second object identifier to access the target object for use at the node. (Second Office Action, pg. 3) Applicants traverse.

The cited col. 4 mentions that a plurality of location identifies may be mapped to a single processor name. Nowhere does this cited col. 4 anywhere disclose or mention the claim requirement of inserting a generated object identifier as claimed into a workflow packet, where nodes use the generated second object identifier to access objects in the workflow packet for use at the node. Instead, the cited col. 4 discusses how a plurality of location identities may map to a single process name. This is different than the claim requirement of inserting generated second object identifiers into workflow packets as claimed.

Accordingly, Applicants submit that claims 1, 13, and 25 are patentable over the cited art because the cited Kukura does not disclose all the claim requirements.

Claims 2, 14, and 26 are patentable over the cited art because they depend from one of claims 1, 13, and 25, which are patentable over the cited art for the reasons discussed above. Moreover, these claims provide additional grounds of distinction over the cited art.

Claims 2, 14, and 25 further require that the data stores are capable of being different types of data stores and from different vendors. The Examiner cited col. 4, lines 3-9 of Kukura as disclosing the additional requirements of these claims. (Second Office Action, pg. 3) Applicants traverse.

The cited col. 4 mentions that the system may comprise a process name to process mapping and that a single process name may map to a plurality of processes. Selection of a process from a plurality of processes may be determined at run time. Nowhere does the cited col. 4 anywhere disclose that different data stores are capable of being different types and from different vendors. There is no mention in the cited col. 4 of data stores from different vendors. Instead, the cited col. 4 discusses how process names map to processes

Accordingly, claims 2, 14, and 25 provide additional grounds of patentability over the cited art because the additional requirements of these claims are not disclosed in the cited art.

Independent claims 3, 15, and 27 concern performing an Input/Output (I/O) operation on an object during execution of a workflow comprised of nodes, and require: providing a plurality of objects stored in one of multiple data stores, wherein each object is identified within the data store with a first object identifier; providing a workflow packet referencing at least one object with a second object identifier, wherein the second object identifier indicates one of the data stores and the first object identifier of the referenced object in the data store; receiving, from one node, an I/O request for one target object referenced by one second object identifier in the workflow packet; determining from the second object identifier the data store of the target object and the first object identifier of the target object; and performing the I/O request on the target object at the determined first object identifier in the determined data store.

The Examiner referenced the rejection of claim 1 in rejecting the requirements of independent claims 3, 15, and 27. (Office Action, pgs. 3-4) Applicants traverse for the following reasons.

As with claims 1, 13, and 25, claims 3, 15, and 27 require that a workflow object have at least one second object identifier, indicating one of the data stores and the first object identifier identifying the object in the data store. As discussed above, nowhere does the cited Kukura disclose these requirements. The cited Kukura discusses a location service for object migration. References to objects are exported that contain information needed to communicate with the locator rather than the server in which the objects are implemented. Further, the cited Kukura discusses a prototype object reference referred to as a prototype direct IOR that includes information needed by a client to communicate with the server and a prototype indirect IOR with information needed to communicate with a location agent. Nowhere does this cited Kukura anywhere disclose a workflow object referencing at least one object with a second object identifier, where the second object identifier indicates one data store and a first object identifier.

Moreover, the cited Kukura is concerned with references to a server and location agent. The cited Kukura does not disclose providing a second object identifier in a workflow packet to use to access the target object when the workflow packet is being processed at the node. Instead, the cited Kukura is concerned with references to a location agent and server, not providing a second object identifier to identify objects referenced by workflow packets.

Accordingly, independent claims 3, 15, and 27 are patentable over the cited Kukura because the cited Kukura does not disclose all the claim requirements.

Claims 4-12, 16-24, and 28-36 are patentable over the cited art because they depend from one of claims 3, 15, and 27, which are patentable over the cited art for the reasons discussed above. Moreover, the following dependent claims provide additional grounds of patentability over the cited art.

Claims 4, 16, and 28 depend from claims 3, 15, and 27 and further require that one workflow packet is associated with a plurality of the nodes in the workflow, and wherein the nodes submit I/O requests for one or more objects referenced by the second object identifiers in the workflow packet. The Examiner referenced the rejection of claim 1 as disclosing the requirements of these claims. (Second Office Action, pg. 4) With respect to claim 1, the Examiner found that the title of Kukura discloses that a workflow packet is accessed by users at the nodes in the workflow. (Second Office Action, pg. 2) Applicants traverse the rejection of claims 4, 16, and 28 with respect to the cited title of Kukura.

The cited title discusses providing object references in a distributed object environment supporting object migration. Nowhere does the cited title or any other cited part of Kukura anywhere disclose the claim requirement that the node submit I/O requests for one or more objects referenced by the second object identifiers in the workflow packet.

Accordingly, the additional requirements of claims 4, 16, and 28 provide additional grounds of patentability over the cited Kukura because the additional requirements of these claims are not disclosed in the cited art.

Claims 5, 17, and 29 provide additional grounds of patentability over the cited art for the reasons discussed with respect to claims 2, 14, and 26.

Claims 6, 18, and 30 depend from claims 3, 15, and 27 and further require defining at least one work item for each node including a reference to the workflow packet, wherein the work item includes actions to perform with respect to at least one object in one data store referenced in the workflow packet; and receiving I/O requests from multiple nodes for objects referenced by second object identifiers in the workflow packet.

The Examiner cited col. 3, line 57 to col. 4, line 9 of Kukura as disclosing the additional requirements of these claims. (Second Office Action, pg. 4) Applicants travers.

The cited cols. 3-4 mentions a system for facilitating object migration in a distributed object computing environment comprising an endpoint identity to location identity mapping, a location identity to process name mapping such that the endpoint identity to location identity

mapping is independent of the location identity to process name mapping. The system also has a process name to process activator mapping. The system permits a plurality of location identities to be mapped to a single process name, and a single process name may be mapped to a plurality of processes. Selection of a process from a plurality may be determined by a criterion determined at runtime.

Although the cited cols. 3-4 discuss mappings of locations and processes, nowhere does the cited cols. 3-4 anywhere disclose or mention the claim requirements of defining at least one work item for each node including a reference to the workflow packet, wherein the work item includes actions to perform with respect to at least one object in one data store referenced in the workflow packet. Further, nowhere do the cited cols. 3-4 anywhere disclose or mention receiving I/O requests from multiple nodes for objects referenced by second object identifiers in the workflow packet. There is no mention or disclosure in the cited Kukura of workflow operations as claimed. Applicants submit that providing mapping of process name to processes and mappings of location to location identities does not disclose the specific claimed workflow related operations.

Accordingly, the additional requirements of claims 6, 18, and 30 provide additional grounds of patentability over the cited Kukura because the additional requirements of these claims are not disclosed in the cited art.

Claims 7, 19, and 31 depend from claims 3, 15, and 27 and further require that the I/O request comprises a workflow I/O request, wherein each data store is accessed using data store interfaces, and further require: providing a mapping of workflow I/O requests to the data store interfaces for each of the data stores, wherein each workflow I/O request maps to one or more data store interfaces for each data store, wherein the data store interfaces implement the workflow I/O requests in the data store and determining from the mapping the at least one data store interface for the determined data store that implements the workflow I/O request in the determined data store, wherein the workflow I/O request is performed using the determined at least one data store interface.

The Examiner cited the above discussed col. 3, line 57 to col. 4, line 9 of Kukura as disclosing the additional requirements of these claims. (Second Office Action, pg. 4) Applicants traverse.

As discussed, the cited cols. 3-4 discuss mappings of locations and processes. However, nowhere in the cited cols. 3-4 is there any disclosure or even mention of the claim requirements of specific workflow related mappings and use of such mappings as required by these claims. Specifically, nowhere do the cited cols. 3-4 anywhere disclose providing a mapping of workflow I/O requests to the data store interfaces for each of the data stores, wherein each workflow I/O request maps to one or more data store interfaces for each data store, and wherein the data store interfaces implement the workflow I/O requests in the data store. Further, nowhere is there any disclosure or mention of the claim requirement of determining from the mapping the at least one data store interface for the determined data store that implements the workflow I/O request in the determined data store, wherein the workflow I/O request is performed using the determined at least one data store interface.

Accordingly, the additional requirements of claims 7, 19, and 31 provide additional grounds of patentability over the cited Kukura because the additional requirements of these claims are not disclosed in the cited art.

Claims 8, 20, and 32 provide additional grounds of patentability over the cited art for the reasons discussed with respect to claim 2 and the requirement that the data stores are capable of comprising different types of data stores from different vendors that utilize different sets of data store interfaces to enable access to objects in the data stores. Moreover, nowhere does the cited Kukura disclose or mention the additional requirement that the mapping enables the workflow I/O requests to be executed across heterogeneous data stores.

Accordingly, the additional requirements of claims 8, 20, and 32 provide additional grounds of patentability over the cited Kukura because the additional requirements of these claims are not disclosed in the cited art.

Claims 10, 22, and 34 depend from claims 3, 15, and 27 and further require receiving a request, from at least one node, to add one second object identifier to the workflow packet referencing one object in one of the data stores that is not already referenced in the workflow packet, wherein subsequent nodes in the workflow are capable of accessing the object referenced by the added second object identifier. The Examiner cited col. 5, lines 45-51 of Kukura as teaching the additional requirements of these claims. (Second Office Action, pg. 5) Applicants traverse.

The cited col. 5 mentions that the resolution of an indirect IOR, which enables the client to communicate with the location agent, may result in another indirect IOR and this process may be repeated a number of times before a direct IOR, used to communicate with the target object's endpoint, is used to invoke the target object. Nowhere does this cited col. 5 anywhere disclose receiving from a node a second object identifier to add to a workflow packet referencing one object in the data store. Instead, the cited col. 5 discusses different types of references, direct versus indirect IORs, may be used to access a target object.

Accordingly, claims 10, 22, and 34 provide additional grounds of patentability over the cited Kukura because the additional requirements of these claims are not disclosed in the cited Kukura.

Conclusion

For all the above reasons, Applicant submits that the pending claims 1-36 are patentable over the art of record. Applicants have not added any claims. Nonetheless, should any additional fees be required, please charge Deposit Account No. 09-0460.

The attorney of record invites the Examiner to contact him at (310) 553-7977 if the Examiner believes such contact would advance the prosecution of the case.

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By: _____

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